

## **Cognitive Ethology at the End of Neuroscience**

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"Eliminative Materialism is the thesis that our common-sense conception of psychological phenomena constitutes a radically false theory, a theory so fundamentally defective that both the principles and the ontology of that theory will eventually be displaced, rather than smoothly reduced, by completed neuroscience." (Paul Churchland 1981:67)

### **A Short, Simple History**

In the beginning, humans were animals. Accounts of the belief systems of aboriginal peoples often emphasize the fact that these peoples viewed themselves as continuous with the rest of nature (Whitt et al. 2001). Animals were worshiped, hunted, and respected. They were also agents with whom one made agreements (Martin 1978), and in some cases even entered into conjugal relationships (Passmore 1974). Of course aboriginal peoples distinguished between those who were members of their own group and those who were outsiders. But, in many cases, some animals were considered insiders and other humans were treated as outsiders. Thus, for many aboriginal peoples, life was fully lived in interspecies communities

Then along came Humanism. There are many ways of characterizing Humanism and dating its arrival. Viewed historically, it was a cultural movement that arose during the Italian Renaissance, though it looked back to the classical world. Protagoras's oft-quoted remark, "man is the measure of all things," however it was originally intended, conveys the spirit of Humanism. Humanism can broadly be characterized as "[a]ny philosophy concerned to emphasize human welfare and dignity, and optimistic about the powers of unaided human understanding" (Blackburn 1994:178). On this view, humans are seen as morally distinctive, and the moral difference between humans and other animals is typically thought to rest on a non-moral categorical distinction -- for example that humans are different from other animals in being rational; or that only humans are capable of language, tool use, or some other favored activity.

The rise of Humanism and modern science was temporally coincident, and Humanism's optimism about human understanding helps to explain this association. Humanism advocated science on the ground that scientific knowledge contributes to human welfare. Humanism thus provided a justification for modern science's inauguration of the large-scale, systematic infliction of pain and death on non-human animals in the pursuit of knowledge. Indeed, since there are no elephant Galileos, the very practice of science itself also helped to distinguish humans from other animals. Some might say that Humanism was the theory and science was the practice.

The great exemplar of Humanism's attitude towards animals was the seventeenth century thinker, René Descartes. Descartes, who is often regarded as the founder of modern philosophy, also did important work in optics and analytical geometry. He emphasized the importance of reason, and exalted humans over other animals

Descartes was a dualist in at least the two following respects. First, he taught that humans are composed of two interacting substances: a material substance that is the body, and an immaterial substance that is the mind. Second, he was a dualist with respect to the relation between humans and the rest of nature. Humans and other animals are distinct because, while non-human animals are material substances, humans are essentially immaterial substances associated with material substances. Stated simply his view was that while humans are minded creatures, non-human animals are organic automata who are not harmed when they are subjected to invasive procedures. An unknown contemporary wrote of the scientist followers of Descartes that

[t]hey administered beatings to dogs with perfect indifference; and made fun of those who pitied the creatures as if they felt pain... They nailed poor animals up on boards by